

IN THE CLAIMS

The following is a complete listing of the claims which replaces all previous versions and listings of the claims.

1. (currently amended) A communication system, comprising:
a pre-whitening device adapted to apply pre-whitening data to a received signal to
produce a pre-whitened signal;
at least one detector that is adapted to recognize a pattern corresponding to a request for
access in the pre-whitened signal and compute correlation data corresponding to
the pattern, wherein computing correlation data comprises computing a
correlation matrix and a maximum eigenvalue; and
a threshold detector adapted to determine whether the maximum eigenvalue correlation
data exceeds a ~~pre-whitening request~~ threshold and indicates that an
acknowledgement signal should be transmitted if the ~~pre-whitening request~~
threshold is exceeded.

Claims 2-3 cancelled.

4. (original) The system set forth in claim 1, wherein the correlation data is used to
compute a maximum energy level for the pre-whitened signal.
5. (original) The system set forth in claim 1, wherein the at least one detector is
adapted to recognize the pattern in a specific beam of a fixed beam network.

6. (original) The system set forth in claim 1, wherein the communication system comprises at least a portion of a cellular base station.

7. (original) The system set forth in claim 1, wherein the pre-whitening data comprises a pre-whitening matrix.

8. (currently amended) A method for operating a communication system, the method comprising the acts of:

creating a pre-whitened signal by applying pre-whitening data to a received signal;

detecting a pattern that corresponds to a request for access in the pre-whitened signal;

computing correlation data corresponding to the pattern, wherein computing correlation data comprises computing a correlation matrix and a maximum eigenvalue;

determining whether the maximum eigenvalue ~~correlation data~~ exceeds a ~~pre-whitening request~~ threshold; and

indicating that an acknowledgement signal should be transmitted if the ~~pre-whitening request~~ threshold is exceeded.

Claims 9-10 cancelled.

11. (original) The method set forth in claim 8, comprising the act of using the correlation data to compute a maximum energy level for the pre-whitened signal.

12. (original) The method set forth in claim 8, comprising the act of recognizing the pattern in a specific beam of a fixed beam network.

13. (original) The method set forth in claim 8, comprising the act of defining a pre-whitening matrix to correspond to the pre-whitening data.

14. (currently amended) A communication system, comprising:
means for applying pre-whitening data to a received signal to produce a pre-whitened signal;
means for recognizing a pattern in the pre-whitened signal, the pattern corresponding to a request for access;
means for computing correlation data corresponding to the pattern, wherein computing correlation data comprises computing a correlation matrix and a maximum eigenvalue; and
means for determining whether the maximum eigenvalue correlation data exceeds a ~~pre-whitening request~~ threshold and for providing an indication if the ~~pre-whitening request~~ threshold is exceeded.

15. (currently amended) A cellular base station, comprising:
an antenna array that receives a communication signal;

a pre-whitening device adapted to apply pre-whitening data to the communication signal to produce a pre-whitened signal;

at least one detector adapted to recognize a pattern corresponding to a request for access in the pre-whitened signal and compute correlation data corresponding to the pattern, wherein computing correlation data comprises computing a correlation matrix and a maximum eigenvalue;

a threshold detector adapted to determine whether the maximum eigenvalue correlation data exceeds a ~~pre-whitening request~~ threshold and indicate that an acknowledgement signal should be transmitted if the ~~pre-whitening request~~ threshold is exceeded; and

processing circuitry adapted to support a communication session if an acknowledgment signal is transmitted.

Claims 16-17 cancelled.

18. (original) The cellular base station set forth in claim 15, wherein the correlation data is used to compute a maximum energy level for the pre-whitened signal.

19. (original) The cellular base station set forth in claim 15, wherein the pre-whitening data comprises a pre-whitening matrix.

20. (cancelled)